

S
625.72
H3a
1974

MONTANA DEPARTMENT OF HIGHWAYS

PLEASE RETURN

APPROACH STANDARDS FOR MONTANA HIGHWAYS

STATE DOCUMENTS COLLECTION

JUN 15 1978

MONTANA STATE LIBRARY
930 E Lyndale Ave.
Helena, Montana 59601

1974

Montana State Library



3 0864 1006 4683 8

PREFACE

The following REVISED Approach Standards for Montana Highways has been prepared by the Traffic Design Unit in conjunction with the Right-of-Way Section and Maintenance Bureau of the Montana Department of Highways.

These regulations are adopted and promulgated pursuant to the authority granted the Montana Highway Commission and/or the Department of Highways under current Montana Law; unless otherwise provided or agreed to, they apply to all highways under the Federal Aid System. The frequency, proper placement, and construction of points of access to highways are critical to the safety and capacity of those highways. These regulations are intended to provide for reasonable and safe access to highways, while preserving the safety and utility of the highways to the maximum extent possible. These regulations are not intended to alter or reduce existing or future access control or access limitations; likewise, they are not intended to alter or supersede access which has been agreed to by appropriate written contract by duly authorized agents of the said Department of Highways.

Previous editions of these regulations published under the same title are superceded by this document.



Digitized by the Internet Archive
in 2015

<https://archive.org/details/approachstandard1974mont>

GENERAL REQUIREMENTS

The efficiency and safety of a modern highway are directly related to the amount and character of roadside interference, most of which is caused by vehicles moving to and from businesses, residences, farms and other developments along the highway. Uncontrolled approaches to a highway will soon nullify carefully planned safety and maintenance features, resulting in early obsolescence of the highway. It is, therefore, necessary to establish regulations controlling highway access.

Frontage property owners have certain rights of access to the highway consistent with their needs, and the highway user has a right of safety, and freedom of movement. The purpose of this policy is to establish driveway approach standards which will tend to reconcile and satisfy the needs and rights of both the property owner and the highway user.

If a highway construction or reconstruction project is undertaken which requires the replacement or adjustment of existing access to abutting property, the access facility will be constructed or reconstructed to these standards and in accordance with Right-of-Way agreements. The cost of the work will normally be chargeable to the project.

If a need for access develops subsequent to the initiation of construction or reconstruction work on a highway, the abutting property owner or user must follow the procedure outlined in this manual and the cost of the work will be distributed as indicated herein.

Future changes in the use of property abutting a state highway, such as a change from residential to public use or a change in the type of operation may require changes in the number, design or location of the initially permitted approaches. The property owner then shall obtain a new permit from the Department.

INSTRUCTIONS FOR SECURING AN APPROACH PERMIT

1. A request for a permit to construct or reconstruct any residential, commercial, industrial, public street or road approach should be made to the Chief, Field Maintenance Bureau having jurisdiction over the area.

2. The proper applicant for an approach permit is the owner of the property being served, the contract purchaser or the owner of a long-term lease with the remaining life greater than five years, or their authorized agents. (A real estate sales agent, contractor constructing a building or improvement on the property or a short-term lessee does not ordinarily have authority to agree to the conditions on an approach permit in behalf of the owner of the land.)

3. A brief description of the proposed work shall be included in the request together with a plot plan and the location of the work; preferably tied to the nearest highway milepost or station marker. The name, address and telephone number of the applicant shall also be included.

4. Upon receipt of this request, the Chief of the Field Maintenance Bureau will arrange for a meeting with the applicant, at which time details of the proposed work will be discussed and the "Driveway Approach Application and Permit" (MTCE 112-A) completed and signed by the applicant. In cases where the Chief of the Field Maintenance Bureau determines that the approach will have a significant effect upon the environment and the Department is the lead agency, the applicant is required to include an Environmental Impact Statement with the approach application.

5. The Field Maintenance Bureau Personnel, in conjunction with the Division Traffic Engineer, are delegated authority to approve curb cuts, public and private approaches serving businesses, residences, and agricultural uses in rural and urban areas without further consultation if the traffic

conditions are not congested. In congested areas, usually urban situations the Field Maintenance Personnel and Division Traffic Engineer can request the Manager, Traffic Design Unit, Helena, for further technical aid. If this is the case, the approach should be scaled onto existing plan and profile sheets showing the highway right-of-way and sent to Helena.

6. When the appropriate approvals as outlined above have been secured, the Chief, Field Maintenance Bureau will distribute approved copies of the permit as follows:

Original to Field Maintenance Bureau to file

One copy to the applicant

One copy to the Manager, Traffic Design Unit, Helena, with plot plans showing the approved approach for Traffic Manager's information.

This copy will be reviewed by Traffic, then sent to the Right-of-Way Section for their permanent files.

7. Construction work on the public right-of-way will not be allowed to commence until an approved permit has been issued as prescribed above.

8. All approaches to a highway under contract and/or construction not covered by a right-of-way agreement, shall be submitted on Form MTCE 112-A to the Chief, Field Maintenance Bureau.

DEFINITIONS OF TERMS USED

<u>Approach</u>	That section of the highway right-of-way between the outside edge of shoulder and the right-of-way line which is designed as a roadway for the movement of vehicles between the highway and the abutting property.
<u>Approach Flare or Radii</u>	The angle or curve radius connecting the approach to the outside edge of the highway shoulder.
<u>Approach Angle</u>	The angle between the highway centerline and the extended approach centerline measured in a clockwise direction from the highway centerline.
<u>Approach Width</u>	Width of the approach excluding flares or transitions measured at right angles to approach centerline.
<u>Corner Clearance</u>	(At an intersecting street or highway) the distance, measured along the outside edge of shoulder or curb line, between the end of intersecting curb radius, edge of pavement of the intersecting highway, or frontage boundary line and the extension of the nearest approach edge, including flares or radii.
<u>Department</u>	The Montana Department of Highways.
<u>Distance Between Approaches</u>	The distance measured along the curb line or outside edge of shoulder between the extensions of the near edges of adjacent approaches, excluding flares.
<u>Frontage</u>	The distance a separate property is contiguous to highway right-of-way measured along the curb line or outside edge of shoulder, between frontage boundary lines of the property.

(DEFINITIONS CONTINUED)

<u>Frontage Boundary Line</u>	A line perpendicular to the highway centerline that passes through the point of intersection of the property line and the highway right-of-way line.
<u>Joint Use Approach</u>	An approach shared by two adjacent property owners for service and connection to both their properties.
<u>Lead Agency</u>	The State agency which has primary authority for committing the State Government to a course of action with significant environmental impact.
<u>Plot Plan</u>	This is a sketch to show the Chief, Field Maintenance Bureau the approximate location of the approach. It can show the distance from the nearest milepost or station marker. In the case of an approach in an urban area, city streets would be good ties. It should be on 8 1/2" x 13" paper and show the highway right-of-way.
<u>Private Access Approach</u>	An entrance to and/or from a residential dwelling for the exclusive use and benefit of those residing therein.
<u>Property Line Clearance</u>	The distance measured along the curb line or outside edge of shoulder between the frontage boundary line and the extension of the nearest edge of the approach, including flares or radii.
<u>Public Access Approach</u>	An entrance to and/or from a business, public establishment, or dedicated street intended for use by the general public.
<u>Safety Zone</u>	The area between the outside edge of shoulder or curb line and the right-of-way.

(DEFINITIONS CONTINUED)

Setback
Distance

The horizontal distance measured at right angles to the highway centerline between the right-of-way line and permanent fixtures such as gas pump islands, signs, display stands, buildings, etc. The setback distance should be adequate to provide designated parking on private property.

Sight
Distance

Sight Distance is the length of highway ahead visible to the driver. The minimum sight distance available on a highway should be sufficiently long to enable a vehicle traveling at or near the likely top speed to stop before reaching an object in its path.

State

State of Montana Department of Highways.

TABLE OF CONTENTS TO REGULATIONS

	<u>Page No.</u>
A. <u>General</u>	7
1. Applications	7
2. Private Access Approach	7
3. Public Access Approach	7
4. Number and Arrangements of Driveways	7
5. Consolidation	7-8
6. Use	8
7. Materials	8
8. Base and Surfacing	8-9
9. Construction and Reconstruction	9
10. Inspection-Maintenance	9
11. Changes	9-10
12. Indemnification	10
13. Limitation	10
14. Signs	10
15. Designs	10-14
B. <u>Public Access Approaches</u>	14
1. Construction	14-15
2. General Design	15
3. Safety Zones	15
4. Vehicle Service Fixtures	15-16
5. Dedicated Streets	16-17
6. Large Volume Rural Access	17
7. Drive-in Theatre Approaches	17-18
C. <u>Private Access Approaches</u>	18
1. Construction	18
2. General Design	18
D. <u>Mail Box Encroachments</u>	18-19

REGULATIONS

A. General

1. APPLICATIONS - Application for an approach permit shall be made by the owner or contract purchaser, who shall represent all of the parties interests, and such permits shall be only for the bona fide purpose of securing or changing access to his property, but not for the purpose of parking or servicing vehicles on the Department of Highways right-of-way.

2. PRIVATE ACCESS APPROACH - A private access approach is defined as a driveway adjacent to a state highway to provide entrance to and/or from a residential dwelling for the exclusive use and benefit of those residing herein.

3. PUBLIC ACCESS APPROACH - A public approach is defined as an entrance to and/or an exit from a business, public establishment or dedicated street adjacent to a state highway.

4. NUMBER AND ARRANGEMENTS OF DRIVEWAYS - The number of approaches should be the minimum number required to adequately serve the needs of the adjacent property. Frontages of 100' or less will be limited to one approach. No more than 2 approaches will be granted to any single property tract or business establishment. Exception may be made where the frontage exceeds 500 feet or if special conditions exist which may benefit the traveling public. In the case of shopping centers or large traffic generators which have 2 or more approaches, it is desirable to have only one approach on the mainline and the other approaches onto the side streets.

5. CONSOLIDATION - Where the probability exists that several adjacent approaches serving limited frontage of one or more property owners will be needed, provisions should be made to provide a

frontage road on the private properties and connected to the highway only at well spaced locations. If the Department approved such a system, an approach permit shall be issued to all property owners concerned and shall state that there is an agreement that all properties shall have access to the highway via the frontage road or a joint use driveway system.

6. USE - For other than private residential approach applications, buildings both proposed and existing and appurtenances and dimensions thereof shall be indicated on the plan, including a notation as to present use of the buildings and details of internal traffic circulation, parking and traffic signs.

7. MATERIALS - The permittee shall furnish all materials necessary for the construction of the entrances and appurtenances authorized by the permit. This shall include furnishing drainage pipe, curb and gutter, concrete sidewalks, top soil or sod, etc., where required. All materials shall be of satisfactory quality and shall be subject to inspection and approval by the Department. See also Base and Surfacing.

8. BASE AND SURFACING - It shall be the responsibility of the permittee to supply, place, and properly compact the approach fill and base material. All base material shall consist of sand, sand-gravel, or sand and rock mixtures containing the sufficient granular fines to fill the voids between the larger gravel and stone, and to permit compaction. In areas without curb and gutter, the approach base and surfacing shall consist of an adequate depth of granular material. When deemed necessary by the Department, for maintenance or operational purposes, the property owner will be required to furnish and place

bituminous surfacing. For road approaches on Primary and Secondary routes, this shall be for a desirable distance of 12 feet.

9. CONSTRUCTION AND RECONSTRUCTION - All new approaches shall be constructed in conformance with the applicable regulations or as approved by the Preconstruction Section, Traffic Unit and the Maintenance Bureau. Any existing approach that is destroyed or removed in the construction or reconstruction of a section of highway shall be replaced or reconstructed by the Department to a design compatible with these regulations.

Provisions for the safe and efficient passage and protection of vehicles and pedestrians during the construction of the approach is very important. During the progress of the work, such barricades, signs, and other traffic control devices shall be erected and maintained by the permittee, as may be deemed necessary by the Department.

10. INSPECTION-MAINTENANCE - The Department shall inspect these installations at the time of construction and at all times thereafter, and require such changes, maintenance, and repairs as may be considered necessary to provide protection of life and property on or adjacent to the highway.

The cost of changes, maintenance and repairs of the approaches, islands, and other access driveway appurtenances on the right-of-way will be the responsibility of the permittee, except as provided under Construction and Reconstruction herein.

11. CHANGES - After construction or reconstruction of a highway project, no driveway, approach, or other improvement constructed on the

right-of-way shall be relocated or its dimensions altered without a duly executed permit from the Department.

12. INDEMNIFICATION - The permittee shall hold harmless the Department and its duly appointed agents and employees against any action for personal injury or property damage sustained by the reason of exercise of his permit.

13. LIMITATION - These regulations shall apply on all highways under jurisdiction of the Department as defined by law.

14. SIGNS - The permittee shall not be permitted to erect any private sign, either fixed or movable, on or extending over any portion of the highway right-of-way. If a marker is considered necessary to delineate an approach, it will be of the standard size, color and mounting height. See page 33.

15. DESIGN - Design requirements for access driveways are as follows:

a. Locations of approaches shall be selected to provide maximum safety for highway traffic and secondly, for users of the driveway.

b. All parts of entrances and exits including the radii but not including right-turn lanes and tapers on highway right-of-way, shall be confined entirely within the permittee's property frontage.

c. Corner clearance at the intersection of a state highway with another highway or street approach shall provide for a sufficient distance from the intersection to preserve the normal and safe movement of traffic through it. If the driveway is to be

located adjacent to a highway or street intersection, the following shall apply:

If the intersecting highway is curbed, the end point of curvature of the driveway radius shall be a desirable distance of 20 feet from the end point of curvature of the intersecting highway radius, or a desirable distance of 10 feet inside the abutting property frontage, whichever will provide the greater distance. See pages 20 and 21.

If the intersecting highway is uncurbed, the end point of curvature of the driveway radius shall be a desirable distance of 50 feet from the edge of pavement of the intersecting highway, or a desirable distance of 10 feet inside the abutting property frontage, whichever will provide the greater distance. See page 22.

At signalized intersections or those that have potential for signalization, the near side corner clearance will be a desirable distance of 30 feet (curbed section) and 40 feet (uncurbed section) inside the abutting property frontage. See paragraph "g" for exceptions.

d. Design details shall preferably reflect the standard or be within the Range as shown on the Public Access Approach, Right Turn Lane and Tapers, or Private Access Approach. See pages 24, 25, 26, and 27.

e. Drainage in highway side ditches shall not be altered or impeded. When drainage structures are required, size of opening, length of pipe and other design features shall be approved by

the Chief, Field Maintenance Bureau. To prevent center or overhang drag, with allowance for load and bounce, crest vertical curves should not exceed a 3 1/4 inch hump in a 10 foot chord and sag verticle curves should not exceed a 2 inch depression in a 10 foot chord.

f. The safety, or buffer zones, adjacent to an approach may be filled in provided the requirements below are fully complied with:

1. All approaches should drain away from the traveled way or shall have sufficient crown to cause all drainage to run to the sides of the approach rather than drain onto the highway, except in areas having curb and gutter. They shall also be constructed so they do not impair the drainage within the highway right-of-way, alter the stability of the roadway subgrade, or materially alter the drainage of the areas adjacent to the highway right-of-way. Culverts and drop inlets shall be installed where required and shall be the type and size specified by the Department. Where the border area is regarded and/or landscaped, it shall have sufficient slope, culverts, and drop inlets for adequate drainage.

2. The filled-in area shall be sufficiently delineated with curbs, guardrails or guide posts to prevent use of the area for parking or travel. Reflectorized guide posts in rural areas are desirable.

3. The filled-in area should extend from the sidewalks, or where no sidewalk exists, as per agreement on the appli-

cation. Provisions will be made by the Department to provide conformance with proposed future improvements to the existing highway section.

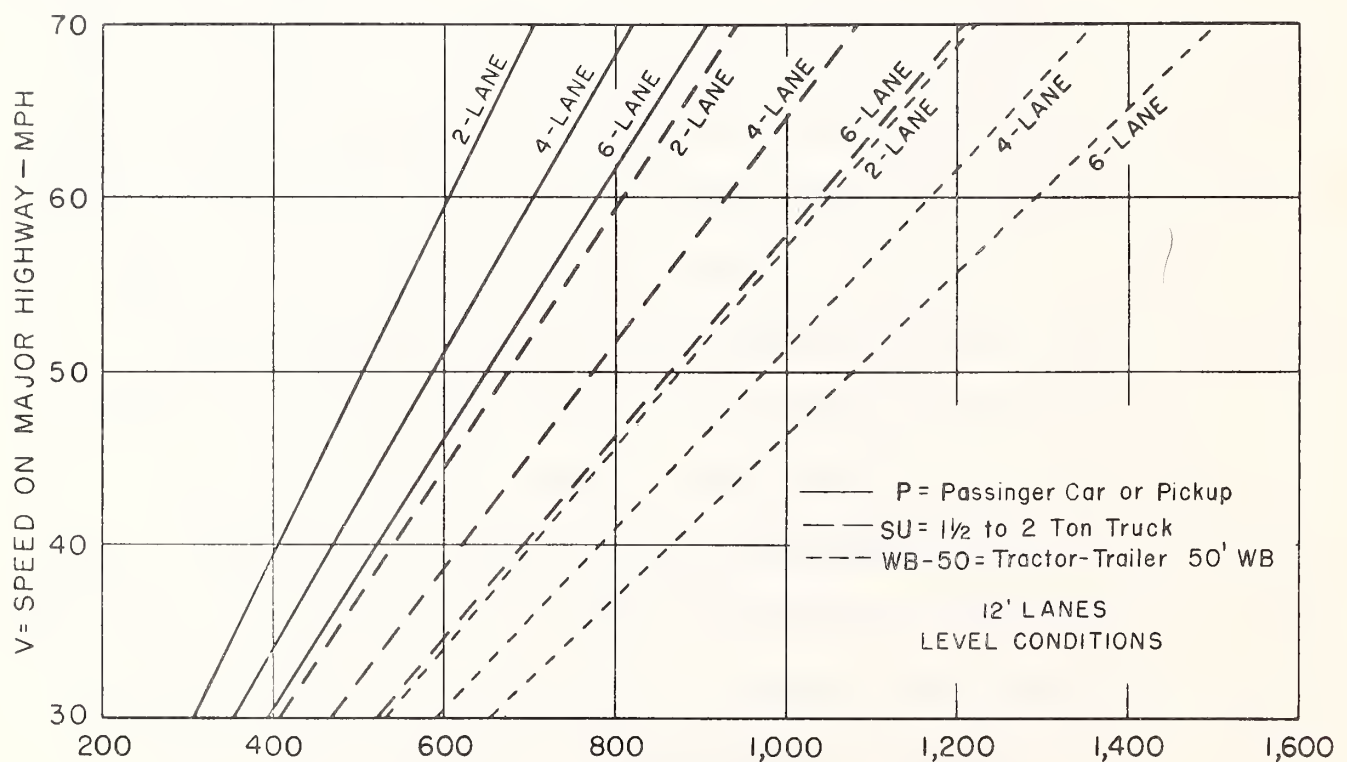
4. Approach slope or grade of the approach shall be so constructed as to conform to the slope of the roadway shoulder from the edge of the traffic lane and to the shoulder line and thence shall be sloped downward within the range of .02 ft./ft. to .08 ft./ft. for a distance necessary to place the low point of the driveway approximately 8 inches below the shoulder elevation. See page 23. If on curbed sections of the highway the maximum allowable slope shown is not great enough to bring the approach to the level of the sidewalk, a depressed sidewalk may be constructed. The connection between the original sidewalk and the depressed sidewalk shall be made through a warped section, the slope of which shall not vary more than 6 percent from the longitudinal grade of the original sidewalk. All new curbs and sidewalks should be constructed to the line and grade of the existing curb or sidewalk with every effort to construct a sidewalk that is level and free of dips. The maximum gradient limits beyond the outer edge of sidewalk shall be the same as for uncurbed approaches.

5. Where approaches have side slopes, these slopes will be constructed at a 6:1 ratio or flatter to promote safety. See page 28.

g. The Department may authorize or require certain changes in the design limits herein when such changes are necessary to

REGULATIONS CONTINUED.

preserve the normal and safe movement of traffic or to permit reasonable access. When physical factors make it impractical to obtain reasonable access within these requirements, appropriate variations may be authorized after review of the proposed approach design by the Preconstruction Section, Traffic Design Unit. Sight distance, as controlled by the design speed of the highway, must be maintained in all cases.



SIGHT DISTANCE AT INTERSECTIONS
REQUIRED SIGHT DISTANCE ALONG MAJOR HIGHWAY¹

B. Public Access Approaches

1. CONSTRUCTION - The permittee shall do all work and pay all costs in connection with construction of approaches and their appurtenances on the right-of-way, except that in areas outside the corporate limits of municipalities, the Department will assist by establishing

¹A Policy on Geometric Design of Rural Highways, 1965, Page 398.

REGULATIONS CONTINUED.

flow-line grades for drainage structures and finished grades for driveway surfaces or such other comparable assistance which the Chief, Field Maintenance Bureau may agree to perform, provided materials are furnished at the site as set out under the regulations entitled MATERIALS herein.

2. GENERAL DESIGN - Refer to Public Access Approach sketches on pages 24, 25, and 26.

3. SAFETY ZONES - (Buffer Zone) all parts of the highway right-of-way between the curb or shoulder line and the right-of-way line along the permittee's property frontage, except the areas contained in the approaches, shall be considered a Safety Zone. Physical barriers such as guideposts, concrete or bituminous curb, sidewalk, fencing, guardrail, etc., shall be installed by the permittee as may become necessary to prohibit vehicle parking and access in safety zones. When physical barriers are installed, they shall be installed according to the appropriate Standard Drawing. The barrier line nearest the highway shall be on line with existing curbs, or established curb line, but not less than 22 feet from the center of the pavement; provided the Chief, Field Maintenance Bureau or his authorized representative does not require a greater distance when needed to preserve the safety and utility of the highway or provided conformance with proposed highway improvements. An attempt should be made to provide an esthetically pleasing safety zone by grading and seeding where possible. The placing of ground cover and use of other beautification principles is desirable.

4. VEHICLE SERVICE FIXTURES - The setback distance from the right-of-way line to the near edge of the gas pump islands, vendor stands,

tanks, water hydrants, and the like, should be at least 15 feet. A greater distance is recommended in rural areas and where free movement of large vehicles is questionable.

Sufficient storage area off of the highway right-of-way shall be provided by the landowner to prevent the servicing, stopping, and storing of vehicles on the approach and to prevent a vehicle from backing out of an approach onto the traveled way. This requirement is especially applicable to parking lots, gas stations, garages, drive-in cafes, drive-in theatres, truck terminals, and other roadside businesses, where a large number of vehicles enter and leave the property in a short period of time. Where necessary to prevent vehicle encroachment on the highway right-of-way, physical barriers may be installed on the right-of-way line. Such physical barriers are to be installed in such a way as not to constitute a hazard to pedestrian or vehicle traffic.

Poles, signs, displays, etc., which restrict the sight distance of a vehicle entering or leaving the establishment should not be installed between the right-of-way line and setback line.

5. DEDICATED STREETS-

a. REGULATIONS. A dedicated street or roadway is considered to be a public approach and shall comply with all the regulations that apply there-to. The only exception being that the width of approach can be widened to match the street, however, the width of street surface should be governed by the expected traffic volumes and not the street right-of-way width.

b. SUPPORTING EVIDENCE. Application by cities, counties or other governmental bodies shall be considered evidence that the

application is for an approach to a dedicated street when so stated.

Developers of sub-divisions or housing tracts shall get approval from the local unit of government having jurisdiction over the dedicated road or street then that unit of government shall submit the approach application to the Department.

6. LARGE VOLUME RURAL ACCESS. Those public access approaches which will generate 25 or more left or right turning vehicle movements per peak hour entering the facility, or have the obvious potential for expansion to this level, should be designed to the shape and dimensions shown on page 29.

7. DRIVE-IN THEATRE APPROACHES -

a. DESIGN OF ENTRANCES. See page 30. Normally, not more than one entrance should exist for each approach, but where arrival volume is almost evenly divided by direction, individual entries for right or left turns, separated by several hundred feet, may be provided. On two-lane roads where left turns are permitted, the entrance shall not exceed 30 feet in width. On four or more lane highways, where left turns are permitted, the entrance shall not be over 20 feet wide. Entry turn speeds of 15 miles per hour should be provided for right turn movements, and 10 miles per hour for left turn movements. Not more than one exit should be permitted for each direction of travel. Where left turns are prohibited, the exit shall be not more than 20 feet wide with a channelizing island in the throat. Right turn lanes and tapers should be used if possible.

b. SIGNS AND LIGHTING. The entrance and exit shall be clearly

indicated by signs installed off the highway right-of-way by the theatre permittee, and it is recommended that the permittee install adequate lighting of the entrances and exits to assist in the safe movement of traffic.

C. Private Access Approaches

1. CONSTRUCTION - The permittee shall do all work and pay all costs in connection with the construction of approaches and their appurtenances on the right-of-way except that in areas outside the corporate limits of municipalities, the Department will assist in establishing the flow-line grade for drainage structures and finished grades for driveway surfaces or such other comparable assistance which the Chief, Field Maintenance Bureau may agree to perform.

2. GENERAL DESIGN - Refer to Private Access Approach sketch page 27.

D. Mail Box Encroachments - Mail boxes placed along non-controlled access highways are a hazard to run-off the road type accidents. The hazard can be minimized by utilizing the following standards: See page 31.

1. Mail boxes will be of appropriate size and material similar in weight to boxes approved by the Post Office.

2. The supports shall not be larger than 4" x 4" timber, 2" pipe, or equivalent strength material.

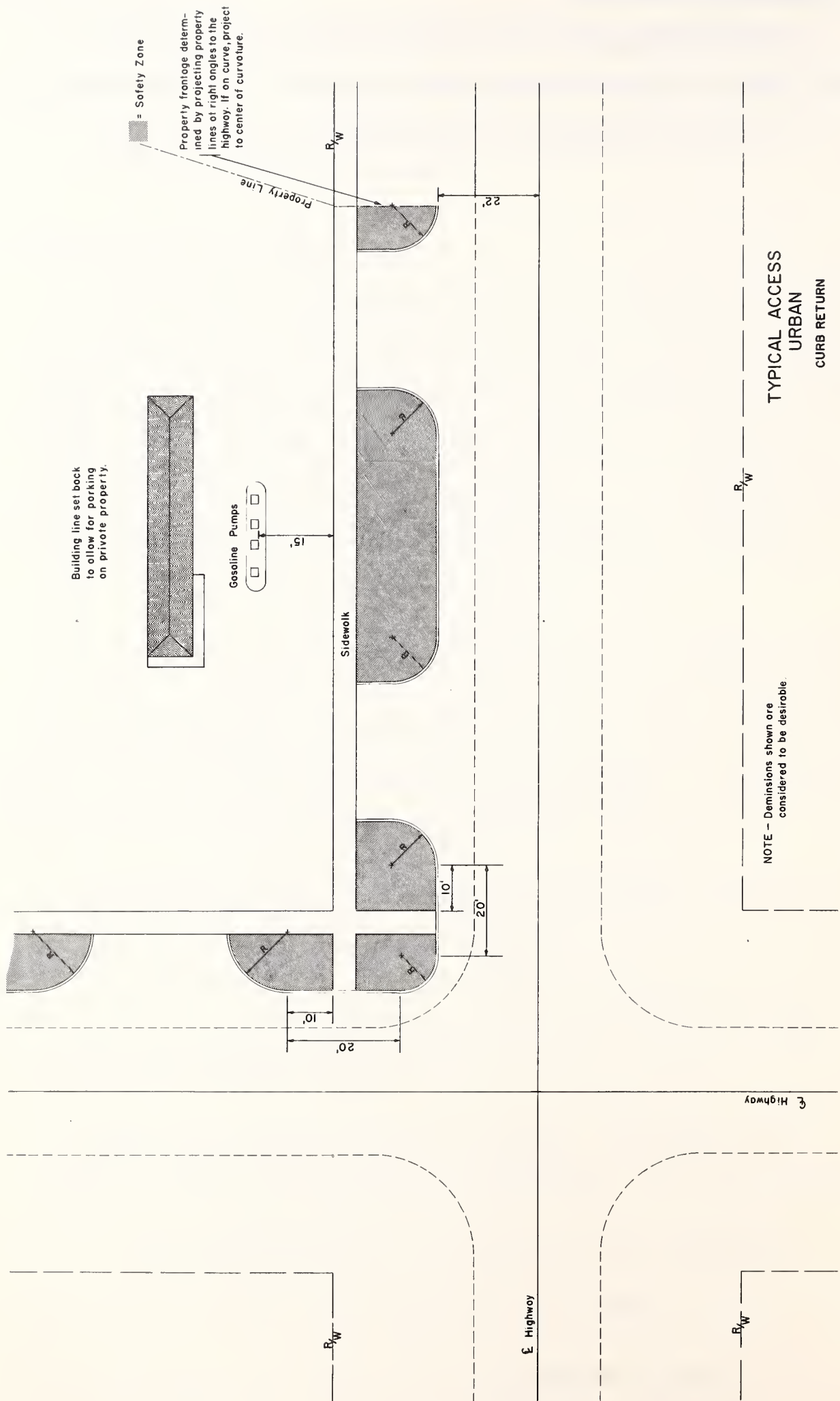
3. Unusual post design is to be discouraged. The weight of any support is not to exceed 30 pounds including that part in the ground.

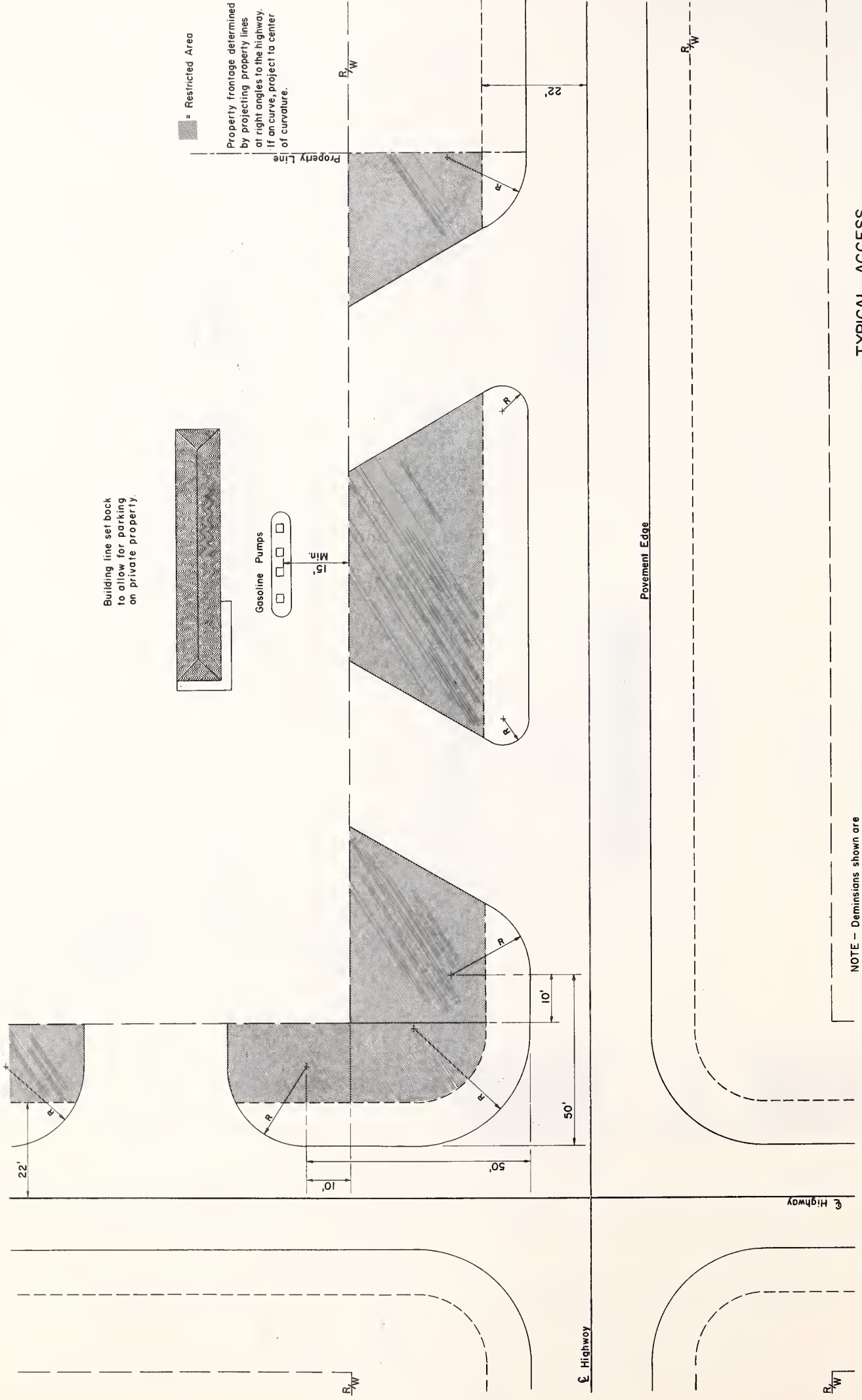
4. If a concrete foundation is used, the top of the foundation is not to project by more than 4 inches above the ground.

5. No more than 3 mail boxes shall be mounted on one post.

REGULATIONS CONTINUED.

6. Mail boxes are to be mounted 3 feet 6 inches vertically from edge of shoulder to the bottom of the box. The lateral clearance is to be a minimum of 4 inches and a maximum of 6 inches.

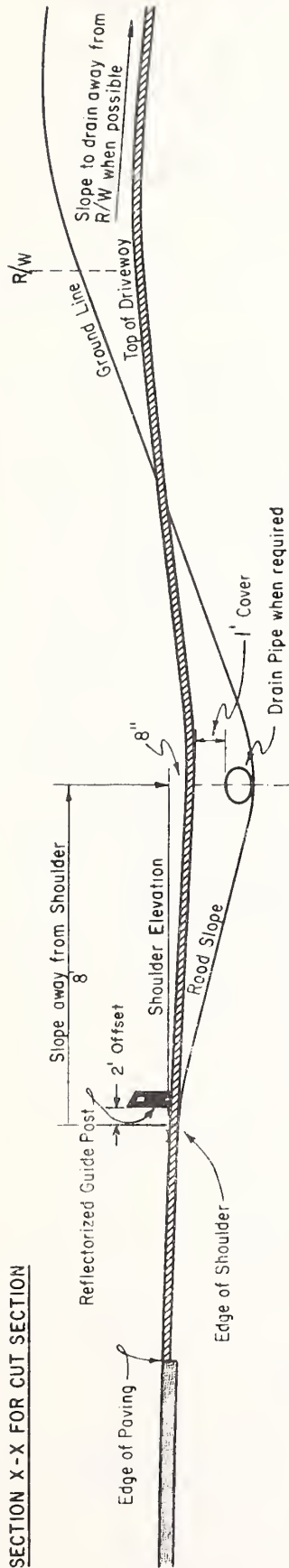




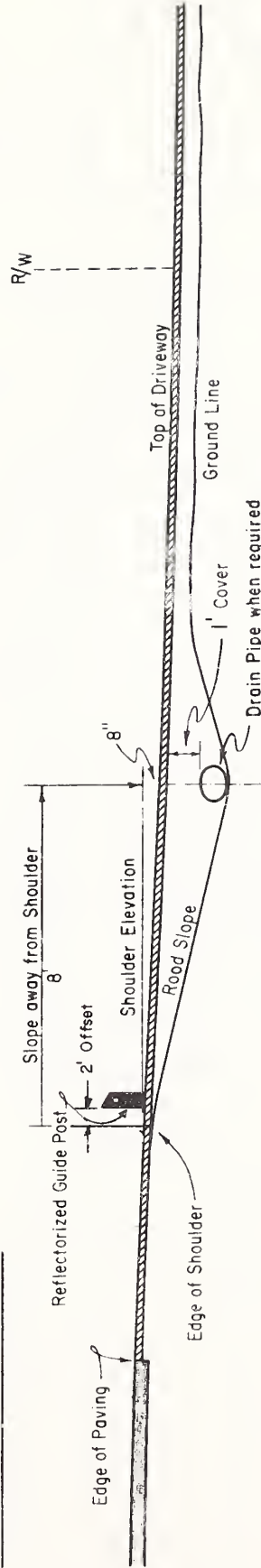
TYPICAL ACCESS RURAL

NOTE - Dimensions shown are considered to be desirable.

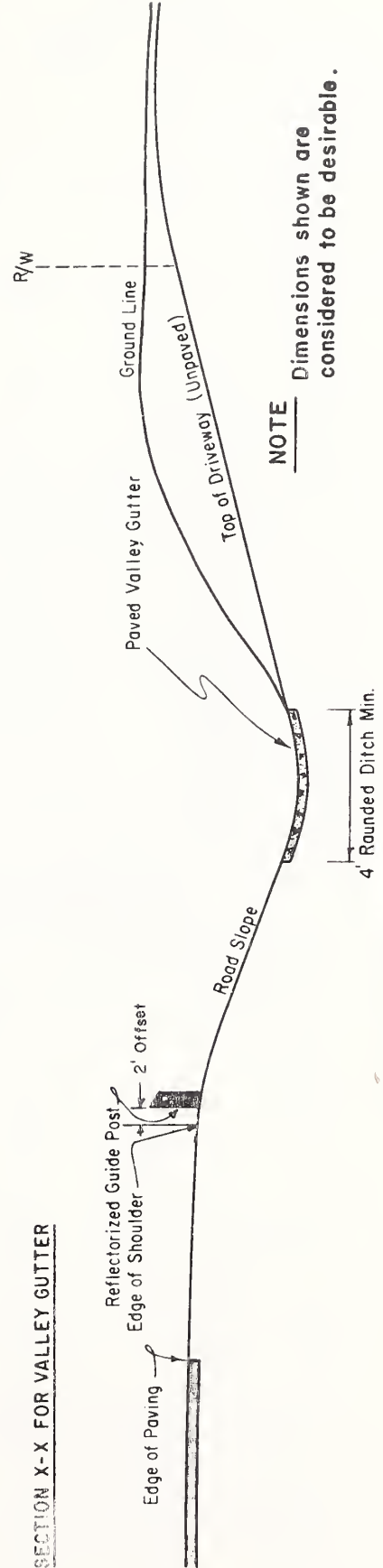
SECTION X-X FOR CUT SECTION



SECTION X-X FOR FILL SECTION



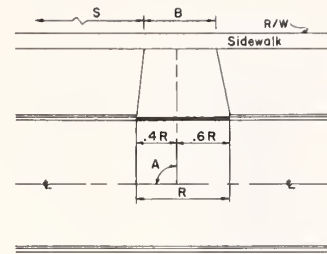
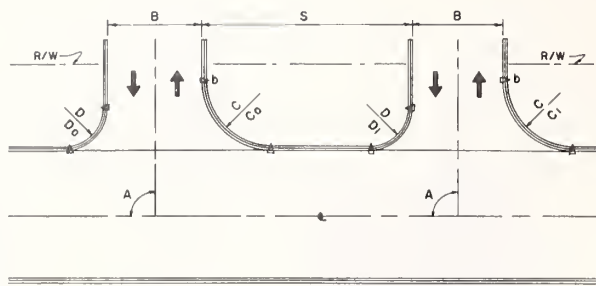
SECTION X-X FOR VALLEY GUTTER



NOTE
 Dimensions shown are
 considered to be desirable.

TYPICAL SECTIONS

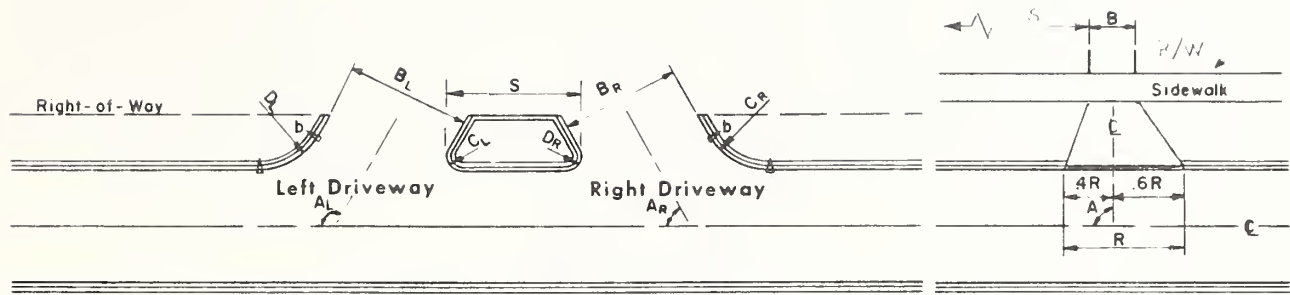
PUBLIC ACCESS APPROACH



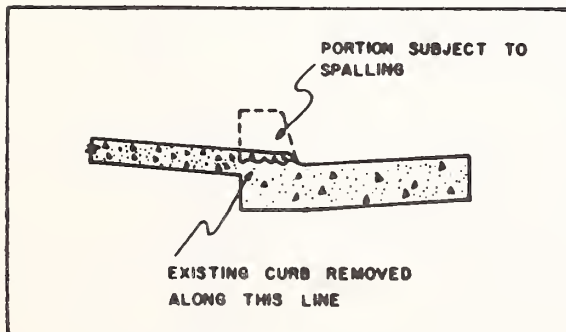
TWO - WAY					
Design Features		Curbed Highway		Uncurbed Highway	
		Standard	Range	Standard	Range
Distance Between Driveways	S	not applicable	25 to 500ft	not applicable	25 to 500ft
Intersecting Angle	A	90°	60 to 120°	90°	60 to 120°
Driveway Width	B	30ft	12 to 40ft	30ft	15 to 50ft
Entering Radius	C	20ft	5 to 50ft	30ft	5 to 50ft
Exiting Radius	D	15ft	5 to 50ft	20ft	5 to 50ft
Curb Cut	R	40ft	20 to 50ft	not applicable	
<i>The standard shall be used unless engineering judgment determines that another dimension within the range is more suitable for a particular site or special condition and is approved by the department.</i>					

ONE - WAY						
Design Features		Curbed Highway		Uncurbed Highway		
		Standard	Range	Standard	Range	
Distance Between Driveways	S	not applicoble	25 to 500ft	not applicoble	25 to 500ft	
Intersecting Angle	A	90°	60 to 120°	90°	60 to 120°	
Driveway Width	B	16 ft	16 to 30 ft	16 ft	16 to 30 ft	
One - way In	Entering Rodius	C _I	20 ft	15 to 50 ft	20ft	15 to 50ft
	Exiting Radius	D _I	10 ft	5 to 15 ft	10ft	5 to 15 ft
One - way Out	Entering Radius	C _O	10 ft	5 to 15 ft	10ft	5 to 15 ft
	Exiting Rodius	D _O	20 ft	15 to 50 ft	20ft	15 to 50ft
Curb Cut	R	26 ft	20 to 40 ft	not applicoble		
<i>The standard shall be used unless engineering judgment determines that another dimension within the range is mare suitable for a particular site ar special condition and is approved by the department.</i>						

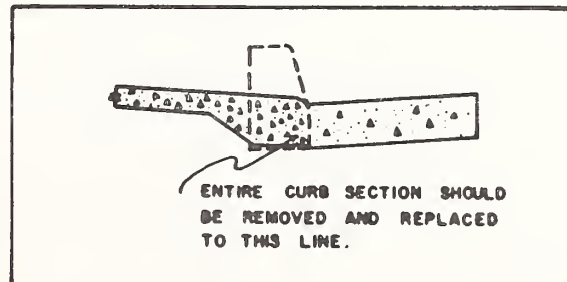
PUBLIC ACCESS APPROACH



DUAL						
Design Features			Curbed Highway		Uncurbed Highway	
			Standard	Range	Standard	Range
Right Driveway	Intersecting Angle	A_R	60°	45 to 90°	60°	45 to 90°
	Entering Radius	C_R	15 ft	5 to 50 ft	20 ft	5 to 50 ft
	Exiting Radius	D_R	5 ft	5 to 25 ft	10 ft	5 to 25 ft
Left Driveway	Intersecting Angle	A_L	120°	90 to 135°	120°	90 to 135°
	Entering Radius	C_L	5 ft	5 to 25 ft	10 ft	5 to 25 ft
	Exiting Radius	D_L	15 ft	5 to 50 ft	20 ft	5 to 50 ft
Driveway Width			B	30 ft	30 ft	15 to 50 ft
Distance Between Driveways			S	25 ft	25 ft	10 to 150 ft
Curb Cut			R	40 ft	20 to 50 ft	not applicable
<p>The standard shall be used unless engineering judgment determines that another dimension within the range is more suitable for a particular site or special condition and is approved by the department.</p>						



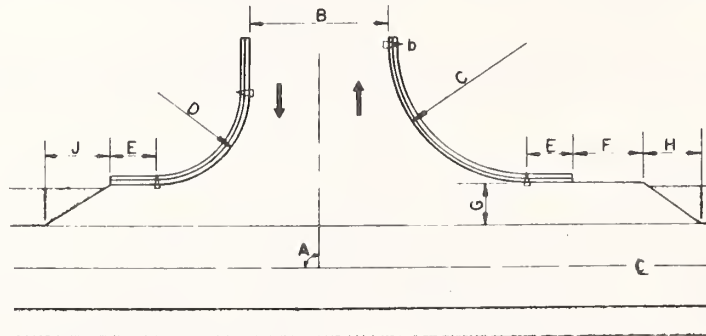
UNSATISFACTORY CURB CUT



RECOMMENDED CURB CUT

PUBLIC ACCESS APPROACH RIGHT TURN LANE & TAPERS

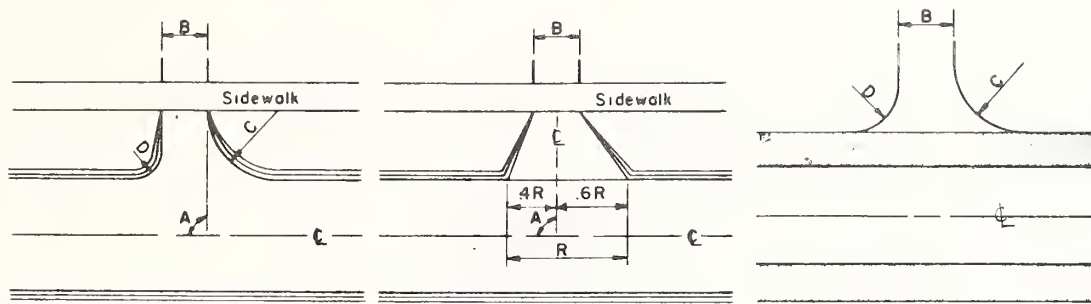
The applicant shall provide right-turn lanes or tapers as part of an approach or driveway system if the department determines that such right-turn lanes or tapers are required to minimize congestion or hazard on the highway caused by vehicles entering the applicant's approach. A right-turn lane shall be preceded by a taper. The design feature dimensions of a right-turn lane and taper shall conform to those shown below.



RIGHT-TURN LANE AND TAPERS					
Design Features		Curbed Highway		Uncurbed Highway	
		Standard	Range	Standard	Range
	E	10 ft	no range	10 ft	no range
Right-turn Lane Length	F	* *		* *	
Right-turn Lane Width	G	12 ft	10 to 15 ft	12 ft	10 to 15 ft
Entering Taper	H	150 ft *	50 to 150 ft	150 ft	50 to 150 ft
Exiting Taper	J	not applicable		50 ft	50 to 150 ft
* If a right-turn lane is used, the Entering Taper standard shall be 50 ft. Without a right-turn lane, the Entering Taper standard shall be 150 ft.					
The standard shall be used unless engineering judgment determines that another dimension within the range is more suitable for a particular site or special condition and is approved by the department.					

* * TO DETERMINE F		
HIGHWAY SPEED M.P.H.	RIGHT TURN LANE F (FT.)	TAPER (FT.)
25	75	50
	0	150
30	100	50
	0	150
35	125	50
40	175	50
45	225	50
50	275	50
55	325	50
60	400	50
65	475	50
70	550	50

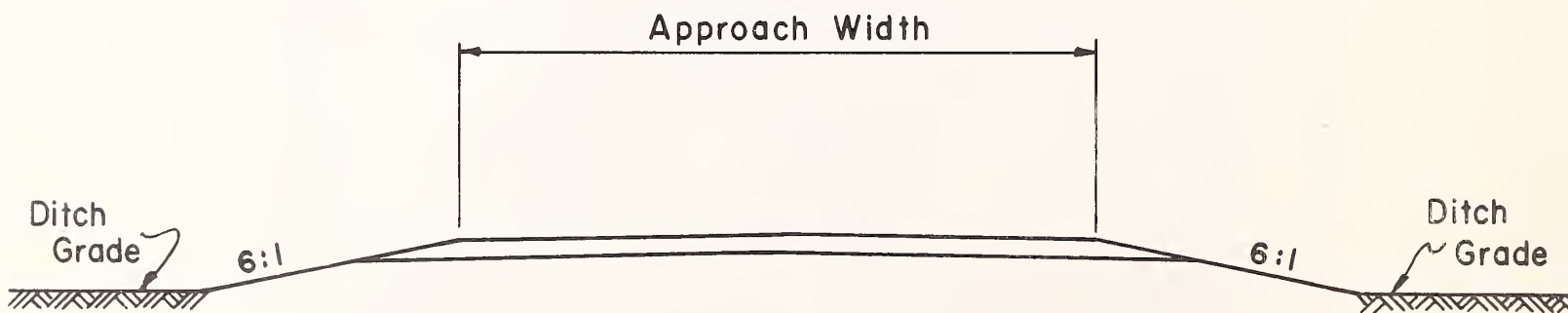
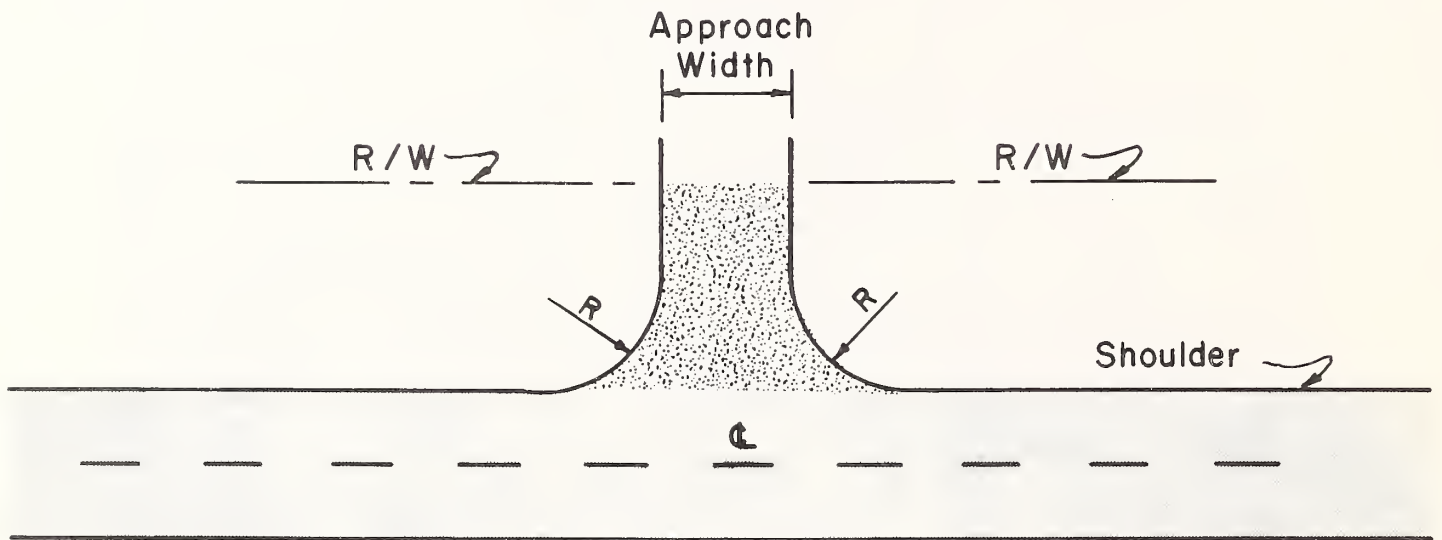
PRIVATE ACCESS APPROACH

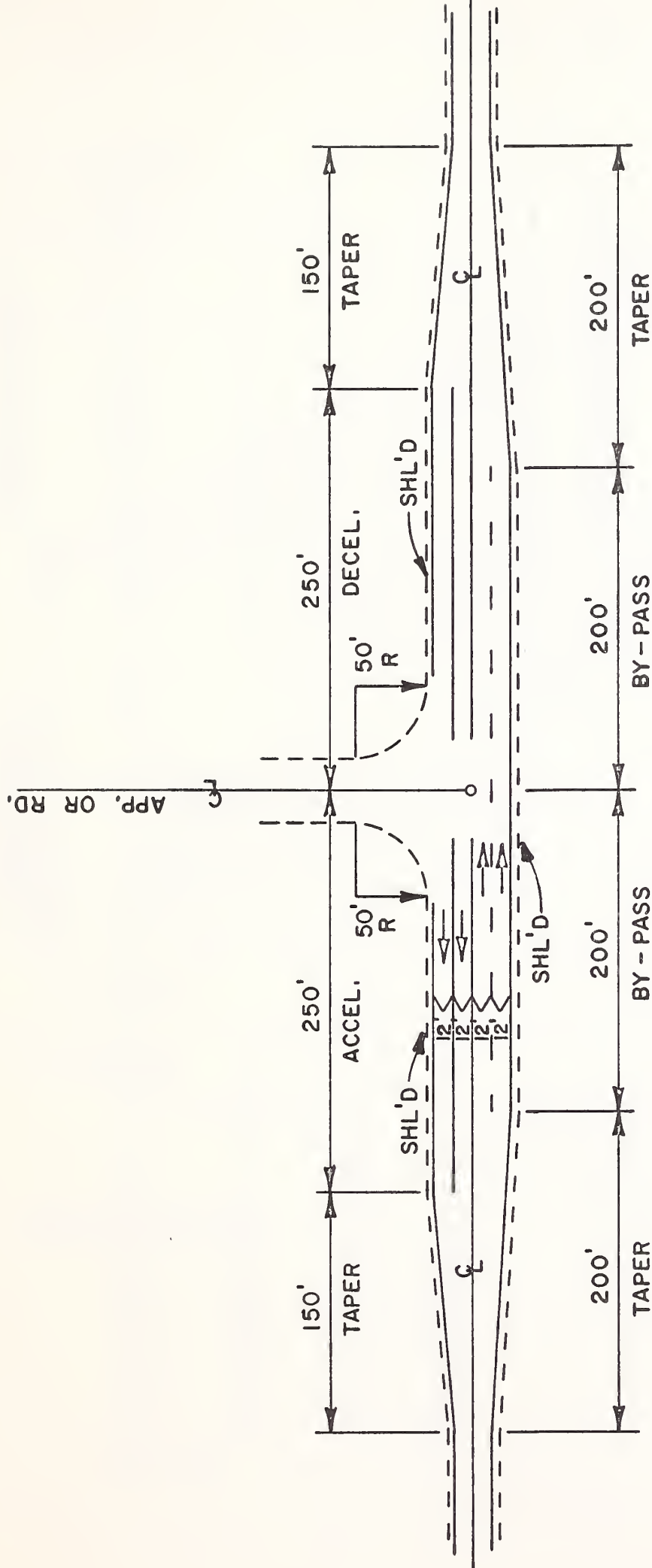


RESIDENTIAL					
Design Features		Curbed Highway		Uncurbed Highway	
		Standard	Range	Standard	Range
Intersecting Angle	A	90°	70 to 110°	90°	70 to 110°
Driveway Width	B	12' ONE WAY 24' TWO WAY	12 to 24 ft	12' ONE WAY 24' TWO WAY	12 to 24 ft
Entering Radius	C	15 ft	5 to 15 ft	20 ft	5 to 40 ft
Exiting Radius	D	6 ft	5 to 15 ft	20 ft	5 to 40 ft
Curb Cut	R	not applicable	20 to 35 ft	not applicable	
<i>The standard shall be used unless engineering judgment determines that another dimension within the range is more suitable for a particular site or special condition and is approved by the department.</i>					

FIELD ENTRANCE AND UTILITY STRUCTURE					
Design Features		Curbed Highway		Uncurbed Highway	
		Standard	Range	Standard	Range
Intersecting Angle	A	90°	70 to 110°	90°	70 to 110°
Driveway Width	B	20 ft	15 to 40 ft	20 ft	15 to 40 ft
Entering Radius	C	not applicable		20 ft	5 to 40 ft
Exiting Radius	D	not applicable		20 ft	5 to 40 ft
Curb Cut	R	26 ft	20 to 50 ft	not applicable	
<i>The standard shall be used unless engineering judgment determines that another dimension within the range is more suitable for a particular site or special condition and is approved by the department.</i>					

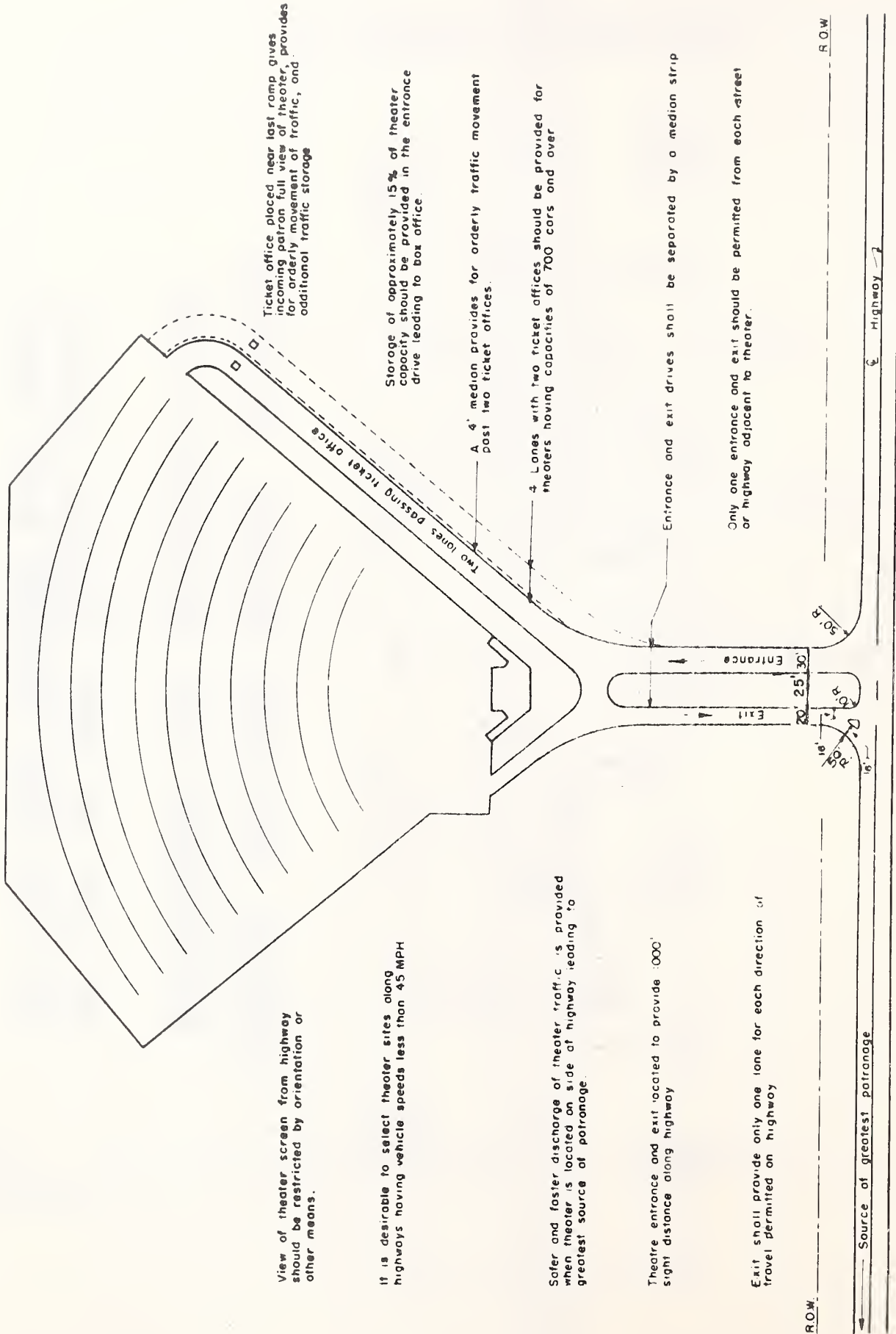
TYPICAL APPROACH SECTION AT RIGHT OF WAY LINE





LARGE VOLUME RURAL ACCESS APPROACH OR INTERSECTION

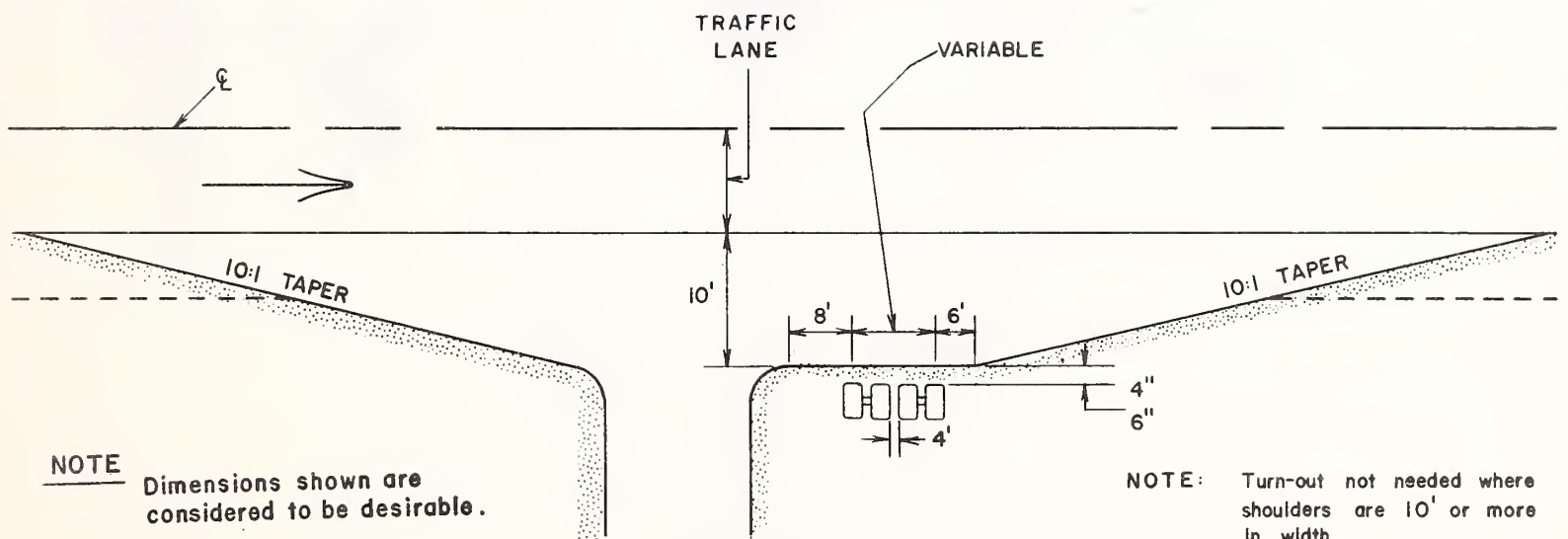
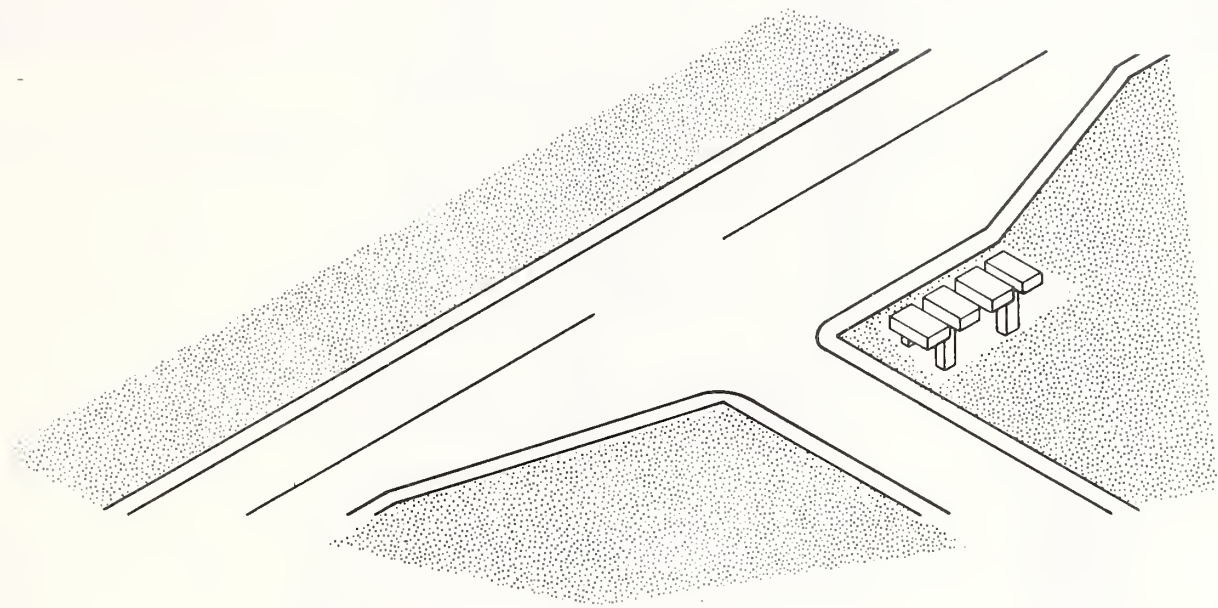
(25 LEFT OR RIGHT TURNING VEHICLES
PER PEAK HOUR ENTERING MINOR ROAD)



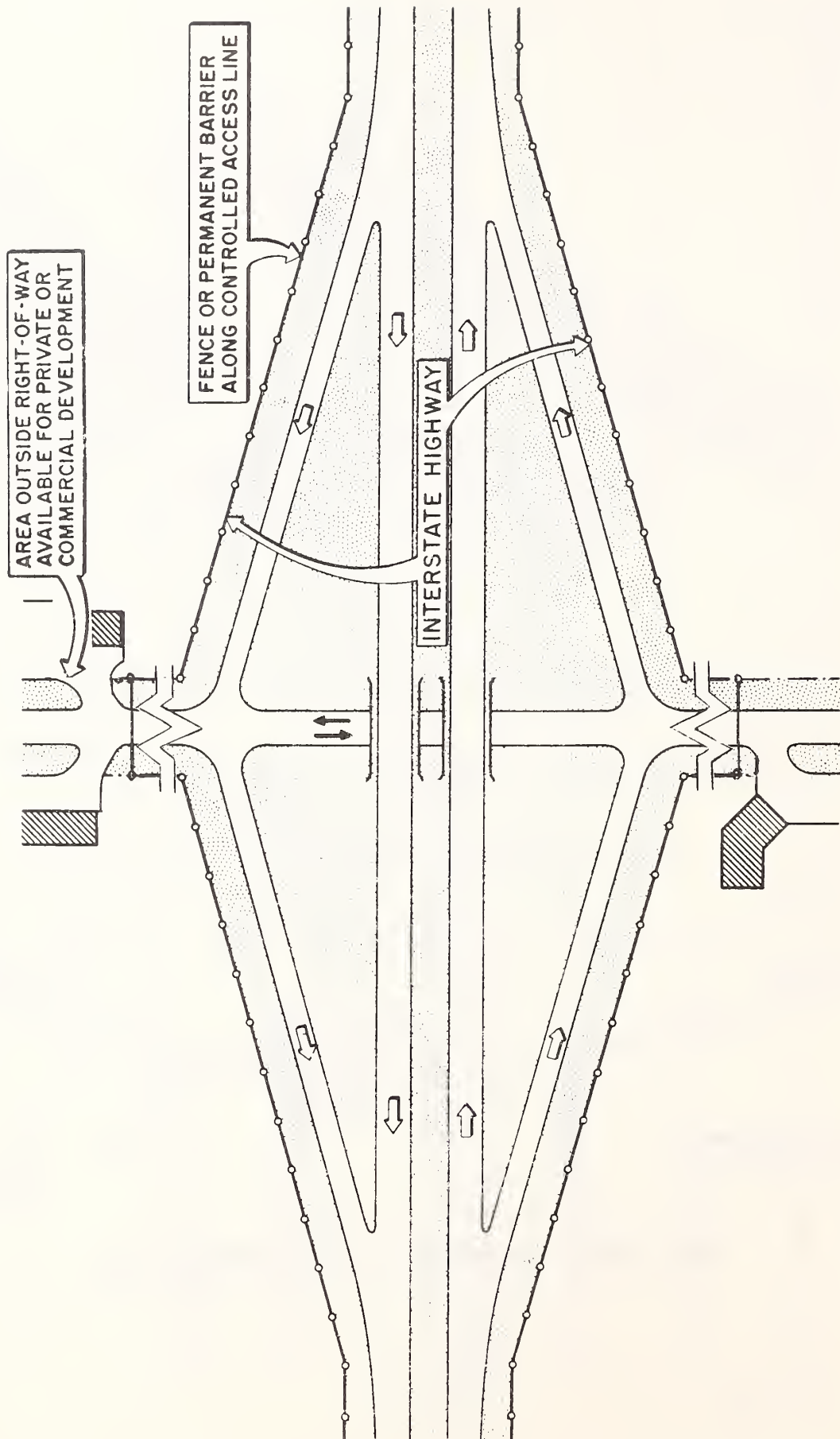
DRIVE-IN THEATER

NOTE

Dimensions shown are considered to be desirable.

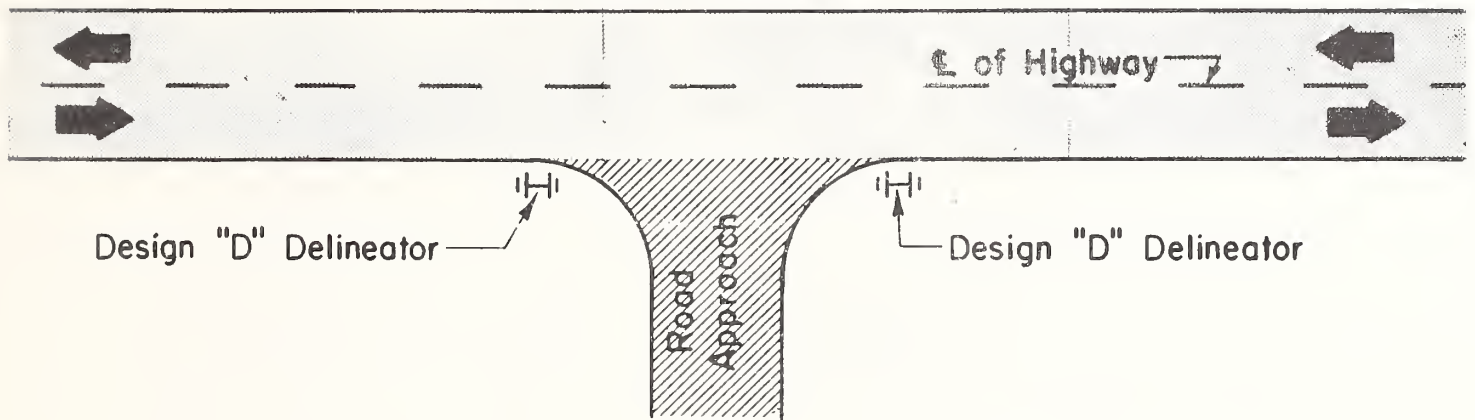


MAIL BOX TURN-OUT AT INTERSECTION

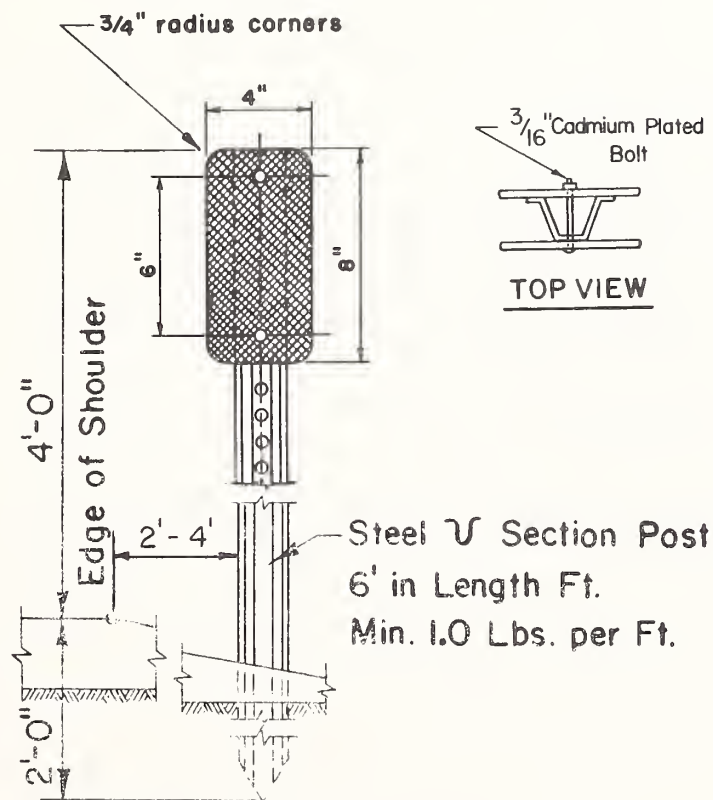


CONTROLLED ACCESS FACILITY
NO FRONTAGE ROADS

TYPICAL DESIGN FOR APPROACH ROAD DELINEATION



DELINEATOR PLACEMENT



NOTE
Dimensions shown are
considered to be desirable.

DESIGN "D" (AMBER, BI-DIRECTIONAL)

NOTE:

Steel post, as illustrated above, is recommended, however, other post materials may be used if aesthetically acceptable and erected as shown in the above sketch. Delineator lens must meet the size and color as specified above.

STATE OF MONTANA - DEPARTMENT OF HIGHWAYS
HELENA, MONTANA 59601
DRIVEWAY APPROACH APPLICATION AND PERMIT

To be Filled in by Department of Highways Personnel			
F.A. ROUTE NO.	APPROACH STATION(s)		
DIVISION	NO.	MILEPOST	
COUNTY	PROJECT		
Recommended by Division Traffic Engineer or Traffic Design Unit	Date	Approved by Field Maintenance Bureau	Date

APPLICANT (Property Owner)

Name: _____ Phone: _____

Address: _____

herein termed the applicant, requests permission to construct approach(es) described and shown on attached plot plan or plan and profile and hereby made a part of this application.

PROPERTY LINES:

Sta. _____ To Sta. _____ (Lt.) (Rt.)

DESCRIPTIONS OF APPROACHES:

Private _____ Public _____

Use of Property or Facility _____
(Residence, Trailer Court, Gas Station, Field Access, Type of Business, etc.)

Type of vehicle to use approach _____
(car, farm vehicles, single unit - tractor-trailer)

Width _____ Flare _____ Side of Roadway _____
(N,E,S,W)

LOCATION:

City or Town _____
(if rural - direction & approx. distance from nearest city or town)

Street Name, if any: _____

DRAINAGE AS DETERMINED BY THE FIELD MAINTENANCE BUREAU

Type _____ Size _____ Length _____

ROADWAY OR HIGHWAY:

Sight Distance: Left _____ Right _____

Surfacing _____ Width _____

Dated at _____, Montana, this _____ day of _____ 19 _____

(Signature of Applicant)

(INSTRUCTIONS CONCERNING USE OF THIS FORM)

Applicant will complete and deliver this form in triplicate to the Field Maintenance Bureau serving the area in which the Approach Permit is requested. The Field Maintenance Bureau Personnel, in conjunction with the Division Traffic Engineer, are delegated authority to approve curb cuts, public and private approaches serving businesses, residences, and agricultural uses in rural and urban areas without further consultation if the traffic conditions are not congested. In congested areas, usually urban situations, the Field Maintenance Personnel and Division Traffic Engineer can request the Manager, Traffic Design Unit, Helena, for further technical aid. If this is the case, the approach should be scaled onto existing plan and profile sheets showing the highway right-of-way and sent to Helena.

P E R M I T

Subject to the following terms and conditions, the permit applied for upon the reverse side hereof, is hereby granted:

1. TERM. This permit shall be in full force and effect from the date hereof until revoked as herein provided.
2. RENTAL. Rental shall be
3. REVOCATION. This permit may be revoked by State upon giving thirty (30) days notice to Permittee by ordinary mail, directed to the address shown in the application hereto attached, but the State reserves the right to revoke this permit without giving said notice in the event Permittee breaks any of the conditions or terms set forth herein.
4. COMMENCEMENT OF WORK. No work shall be commenced until Permittee notifies Chief - Field Maintenance Bureau, shown in application, when he proposes to commence work.
5. CHANGES IN HIGHWAY. If the State changes the highway, or there are other changes to adjoining streets, alleys, etc. which necessitate alterations in structures or installations installed under this permit, Permittee shall make the necessary alterations at Permittee's sole expense or in accordance with a separate agreement.
6. STATE SAVED HARMLESS FROM CLAIMS. In accepting this permit the Permittee, its/his successors or assigns, agree to protect the State and save it harmless from all claims, actions or damage of every kind and description which may accrue to, or be suffered by, any person or persons, corporations or property by reason of the performance of any such work, character of materials used, or manner of installations, maintenance and operation, or by the improper occupancy of said highway right of way, and in case any suit or action is brought against the State and arising out of, or by reason of, any of the above causes, the Permittee, its/his successors or assigns, will upon notice to it/him of the commencement of such action, defend the same at its/his sole cost and expense and satisfy any judgment which may be rendered against the State in any such suit or action.
7. PROTECTION OF TRAFFIC. Insofar as the interests of the State and the travelling public are concerned, all work performed under this permit shall be done under the supervision of the Chief - Field Maintenance Bureau of the Department of Highways and his authorized representatives, and he/they shall indicate barriers to be erected, the lighting thereof at night, placing of flagmen and watchmen, manner in which traffic is to be handled, and shall specify to Permittee how road surface is to be replaced if it is disturbed during operations, but said supervision shall in no way operate to relieve or discharge Permittee from any of the obligations assumed by acceptance of this permit, and especially those set forth under Section 6 thereof.
8. HIGHWAY DRAINAGE. If the work done under this permit interferes in any way with the drainage of the State Highway effected, Permittee shall, at its/his own expense, make such provisions as the State may direct to take care of said drainage.
9. RUBBISH AND DEBRIS. Upon completion of work contemplated under this permit, all rubbish and debris shall be immediately removed and the roadway and the roadside left in a neat and presentable condition satisfactory to the State.
10. WORK TO BE SUPERVISED BY STATE. All work contemplated under this permit shall be done under the supervision of and to the satisfaction of the authorized representative of the State, and the State hereby reserves the right to order the change of location or removal of any structure or installation authorized by this permit at any time, said changes or removal to be made at the sole expense of the permittee.
11. STATE'S RIGHT NOT TO BE INTERFERED WITH. All such changes, reconstructing or relocation shall be done by Permittee, in such a manner as will cause the least interference with any of the State's work, and the State shall in no wise be liable for any damage to the Permittee by reason of any such work by the State, its agents, contractors or representatives, or by the exercise of any rights by the State upon the highways by the installations or structures placed under this permit.
12. REMOVAL OF INSTALLATIONS OR STRUCTURES. Unless waived by the State, upon termination of this permit, the Permittee shall remove the installations or structures contemplated by this permit and restore the premises to the condition existing at the time of entering upon the same under this permit, reasonable and ordinary wear and tear and damage by the elements, or by circumstances over which the Permittee has no control, excepted.
13. MAINTENANCE AT EXPENSE OF PERMITTEE. Permittee shall maintain, at its/his sole expense the installations and structures for which this permit is granted, in a condition satisfactory to the State.
14. STATE NOT LIABLE FOR DAMAGE TO INSTALLATIONS. In accepting this permit the Permittee agrees that any damage or injury done to said installations or structures by a contractor working for the State, or by any State employee engaged in construction, alteration, repair, maintenance or improvement of the State Highway, shall be at the sole expense of the Permittee.
15. STATE TO BE REIMBURSED FOR REPAIRING ROADWAY. Upon being billed therefor Permittee agrees to promptly reimburse State for any expense incurred in repairing surface of roadway due to settlement at installation, or for any other damage to roadway as a result of the work performed under this permit.
16. OTHER CONDITIONS AND/OR REMARKS.
 - a. All approach side slopes will be constructed on not less than 6 to 1 slope.
 - b. No private signs or devices, etc., will be constructed or installed within the Highway Right of Way limits.

Dated at _____, Montana, this _____ day of _____, 19____.

The undersigned, the "Permittee" mentioned in the foregoing instrument, hereby accepts this permit, together with all of the terms and conditions set forth therein.

DEPARTMENT OF HIGHWAYS

By _____
Chief - Field Maintenance Bureau

Permittee

